TITLE

DIELECTRIC SUBSTRATES COMPRISING A POLYIMIDE CORE LAYER AND A HIGH TEMPERATURE FLUOROPOLYMER BONDING LAYER, AND METHODS RELATING THERETO

ABSTRACT

An asymmetric multi-layer insulative film of improved internal adhesive strength is made by combining a layer of polyimide and a high-temperature bonding layer, the high-temperature bonding layer being derived from a high temperature base polymer made of poly(tetrafluoroethylene-co-perfluoro[alkyl vinyl ether]) (PFA) and optionally blended with from 0-60 weight percent poly(tetrafluoroethylene-co-hexafluoropropylene) (FEP). The polyimide and high-temperature bonding layer laminate optionally also contains a layer of unsintered, partially sintered, or totally sintered polytetrafluoroethylene (PTFE) bonded directly to the high-temperature bonding layer. In addition, the polyimide high-temperature bonding layer laminate may be adhered to a poly(tetrafluoroethylene-co-hexafluoropropylene) (FEP) adhesive primer layer to more effectively bond the polyimide core layer to the high-temperature bonding layer. This type of primer layer may also be used as a polyimide-to-metal bonding layer to assist bonding of the polyimide to a metal wire or metal layer.

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